

PREY HAIR REMAINS IN LEOPARD FAECES AT RUHUNA NATIONAL PARK

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ABSTRACT

The food habits of the leopard (*Panthera pardus fusca* Meyer, 1794) at the Ruhuna National Park, Sri Lanka, were analysed by the identification of prey hair remains in faeces collected during January-February 1988. The major prey, comprising 51% of hair-positive scats, was the spotted deer (*Cervus axis ceylonensis* Fisher, 1829). Hairs of the water buffalo (*Bubalus bubalis bubalis* Linnaeus, 1758) and the wild pig (*Sus scrofa cristatus* Wagner, 1839) were collectively present in 45% of hair-positive scats. The results confirm those of a previous investigation in showing the importance of buffer prey species such as the water buffalo and wild pig in the diet of the leopard.

INTRODUCTION

The Sri Lanka leopard (*Panthera pardus fusca* Meyer, 1794), is an endangered species whose numbers have declined rapidly during the past 50 years as a result of habitat destruction and poaching in Sri Lanka. Among the various aspect of the leopard's ecology that have a bearing on its conservation is the need for a detailed knowledge of its food habits. By analyzing the hair remains in faeces collected during 1984-85 at the Ruhuna National Park in southeastern Sri Lanka, we have shown in a previous paper (Amerasinghe *et al.*, 1990) that while the spotted deer (*Cervus axis ceylonensis* Fisher, 1829) was the major prey of the leopard, other mammals like the water buffalo (*Bubalus bubalis bubalis* Linnaeus, 1758), wild pig (*Sus scrofa cristatus* Wagner, 1839), mouse deer (*Tragulus meminna* Erxleben, 1777) and black-naped hare (*Lepus nigricollis sinhala* Wroughton, 1915) formed a significant component of its diet. In this paper we present the result of faeces analysis on collection made during early 1988 in the same study area, and confirm the importance of buffer prey such as the water buffalo and wild pig in the diet of the leopard.

MATERIALS AND METHODS

Leopard faeces were collected from within the 145 km² area comprising Block-1 of Ruhuna National Park between 28 January and 20 February of 1988. The Park is situated in the southeastern low country dry zone of Sri Lanka. Details of the topography, climate and flora of the area are provided in Balasubramaniam *et al.* (1980).

Field collection were done by the trackers of the Department of Wildlife during their routine patrols within the Park. Details of the methods used to recover hair remains in faeces and the preparation of these hairs for identification are provided in Amerasinghe (1983) and Amerasinghe *et al.* (1990). Hair identification was based on the structure of the cuticular scales, the medulla, cross-sectional shape, pigmentation and dimension, the keys and the description in Amerasinghe (1983) being used.

RESULTS AND DISCUSSION

Forty six faecal samples were collected during the study. Eleven of these were extremely old scats in a state of near total decay; no hairs were recovered from them. The others contained intact prey hairs as well as skeletal remains. On the basis of the outward appearance and degree of decomposition of the boluses, most of these (27/35) were classified as "old", indicating that they had been deposited about 1-2 months previous to collection. The remainder (8/35) were classified as "fresh", probably deposited within a fortnight of collection. Observations by one of us (U.B.E.) have shown that leopard faeces decompose almost completely by end of two months under field conditions at Ruhuna. Since the majority of intact scats (30/35) were collected during February, it can be assumed that most of them were deposited during late December or in January.

Data relating to the hair remains in faeces are presented in the Table. *Cervus axis* (51% of hair-positive scats) comprised the major prey item. Other artiodactyls (*Bubalus* and *Sus*) were also prominent, together comprising a 45% occurrence level in hair-positive scats. Next in order of importance were the primates *Presbytis* and/or *Macaca sinica*, the hairs of which are indistinguishable on the basis of microscopical structures (Amerasinghe, 1983). Hairs of the giant squirrel (*Ratufa macroura* Pennant, 1769) were identified for the first time from a leopard scat in Sri Lanka. Skeletal remains in the scat confirmed this identification.

In a previous study (Amerasinghe *et al.*, 1990), the leopard at Ruhuna National Park was found to prey mainly on spotted deer (54% of hair-positive scats), but also took in significant numbers of other prey like water buffalo, wild pig, mouse deer and black-naped hare, which collectively comprised 43.1% of hair-positive scats. These figures agree well with those of the present study; it would seem that *Bubalus* and *Sus*, in particular, are of major importance to the leopard. Both studies, therefore, confirm that while *C. axis* is the major source of food for the leopard, buffer prey species play an important role in ensuring its survival in Sri Lanka.

Table. Hair remains in leopard faeces at Block-1 of Ruhunu National Park during January-February 1988

Total number of Scats	46
No. of Scats with Hair Remains (%)	35 (76.1)
Prey Species	No. of Scats (%) ^a
<u>Cervus axis</u>	18 (51.4)
<u>Bubalus bubalus</u>	10 (28.6)
<u>Sus scrofs</u>	6 (17.1)
<u>Presbytis/Macaca</u> ^b	6 (17.1)
<u>Lepus nigricollis</u>	1 (2.9)
<u>Rattus</u> sp. ^c	1 (2.9)
<u>Ratufa macroura</u>	1 (2.9)
Single prey species in scat	27 (77.1)
Mixed prey species in scat	8 (22.9)
^a Percentages based on total no. of scats with hair remains.	
^b <u>P. entellus</u> or <u>M. sinica</u> . ^c Probably <u>R. norvegicus</u>	

ACKNOWLEDGEMENT

We thank the Warden and staff of Ruhuna National Park for their cooperation in the collection of faeces samples.

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